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where the disease is present in a field the greater infection occurs where the alfalfa weevil is also present. This disease is so injurious that fully 80 per cent. of the first cutting may be lost on account of it. However, while the chief damage is usually noted in the first cutting, the plants may be seriously injured in the crowns and roots, thus causing entire plants to be killed.

P. J. O'GARA

LABORATORY OF PLANT PATHOLOGY,
AMERICAN SMELTING AND REFINING CO.,
SALT LAKE CITY, UTAH,
May 16, 1914

FURTHER NOTES ON TAMARISK

JUDGING from Mr. Carleton's remarks¹ and the writer's experience *Tamarix gallica* is another of those interesting plants that will grow in very dry as well as in exceedingly wet places. This species is extensively planted at Belle Isle, Vermillion Parish, in the broad coastal marsh of Louisiana. The soil here is always saturated with water and is subject to inundation by exceptional tides. The plant is known as salt-water cedar, and its main use is for firewood. Little of that commodity is needed in this austral locality, and sections of the limbs of *Tamarix*, in size from the thickness of a finger to that of the wrist, answer every purpose. The plants are pollarded and closely pruned but quickly produce a new crop of firewood.

W. L. McATEE

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C.

A FACTOR FOR THE FOURTH CHROMOSOME OF DROSOPHILA

A NEW character has recently appeared in *Drosophila* in which the wings are "bent." The factor concerned does not fall within any of the three groups of linked factors so far described. There are four pairs of chromosomes in *Drosophila* (without taking into account possible complications of the XY pair). The number of chromosomes now

corresponds therefore with the number of independent groups of factors. The correspondence goes even further than number, however, for the sex-linked group is known to be distributed with the X chromosome, and all the groups correspond in their size-relations with the chromosomes, there being three large groups and one small, just as in the case of the chromosomes. The factor for "bent" forms the small "group" by itself, and accordingly may be considered to lie in the small chromosome.

HERMANN J. MULLER

DICKERSON¹ ON CALIFORNIA EOCENE

Two brief but valuable papers by Mr. Dickerson call attention to the fact that the apathy with which the Eocene of California has been treated since Gabb's time is less on account of any last word having been said on the subject than the overshadowing economic importance of the later Tertiary horizons of the state.

The use of the name Tejon to embrace all the post-Martinez Eocene of the Pacific coast and the recognition of the section south of Mt. Diablo as a standard for this formation can hardly meet with general approval. It appears that this section is composed exclusively of beds belonging to a formation stratigraphically younger and separated from the horizon at the type section in the Canada de las Uvas near Fort Tejon by several thousand feet of strata as well as a considerable time gap.

The writers² have shown that in Oregon and Washington the Eocene may be divided into three faunal divisions, the Chehalis, Olequa, and Arago or Ione formations. The

¹ Dickerson, Roy E., "Fauna of the Eocene at Marysville Buttes, California," Bull. Dept. Geol. Univ. of California, VII., p. 257-298, Pl. XI-XIV., 1913; "Note on the Faunal Zones of the Tejon Group," *loc. cit.*, VIII., No. 2, p. 17-25, 1914.

² Arnold, R., and Hannibal, H., "The Marine Tertiary Stratigraphy of the North Pacific Coast of America," *Proc. Am. Phil. Soc.*, LIII., No. 212, p. 559-605, 1913.

¹ SCIENCE, N. S., XXXIX., pp. 692-694, May 8, 1914.